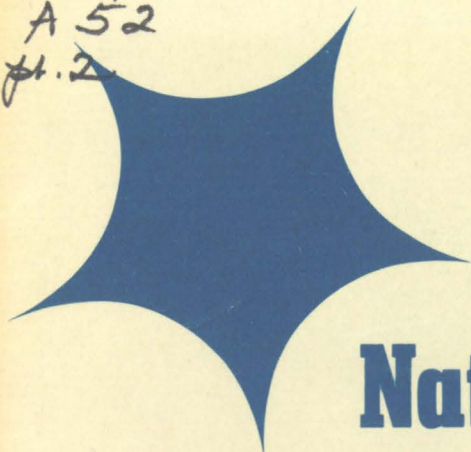


SD 426
A 52
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National Forest Wildlife



OPERATION OUTDOORS
PART 2

U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE



SD 426
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PREFACE . . .

National forests and the national grasslands are great reservoirs of natural resources of tremendous value to the American public. These public lands consist of 185 million acres of forest, range, and watershed lands in 41 States. They contain about one-third of the Nation's standing sawtimber, give rise to many streams, provide homes for a third of the big game, and offer one of the largest accessible areas of unposted hunting, fishing, and recreation land in the country. For America's industry and people, they are major sources of wood, water, forage, and recreation.

Administered by the Forest Service, U.S. Department of Agriculture, the national forest system, consisting of national forests and national grasslands, is managed under the conservation principles of multiple use and sustained yield. Hereafter, for simplicity, all mention of the national forests in this bulletin refers also to the national grasslands.

Part 1 of Operation Outdoors, published in January 1957, presented a 5-year program for the development of national forest recreational facilities. Then in March 1959, a "Program for the National Forests" was sent to Congress. This program—Operation Multiple Use—outlines long-range objectives and short-term proposals to accelerate the management of all national forest resources.

Part 2 of Operation Outdoors, presented here, explains in greater detail the short-term wildlife habitat management objectives outlined in the program for the national forests. It describes the size and nature of the problem and provides for fully coordinating wildlife needs with all other national forest resource management activities and for the expansion of cooperative wildlife work with the States. It sets forth objectives toward which the Department of Agriculture will advance as rapidly as possible within the overall budgetary requirements of the Federal Government and the States.

Part 2 is another forward-looking plan that the Department of Agriculture presents as a part of its program for the national forests—"Operation Multiple Use."



WHY WE BELIEVE IN

PART 2

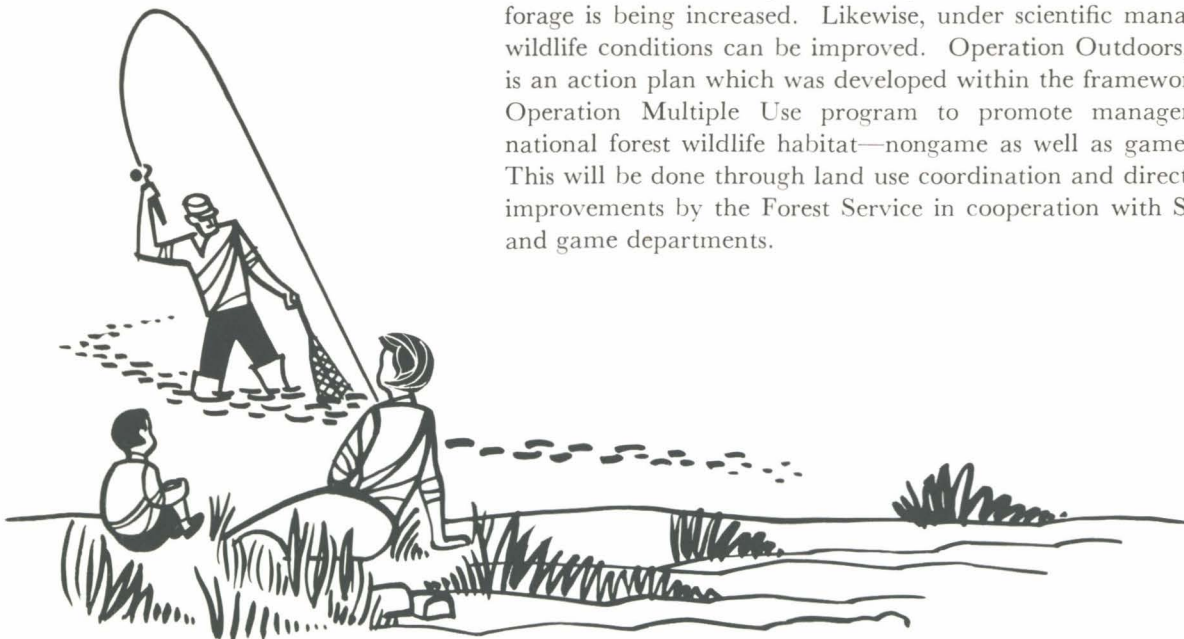
We are living in an atomic age—an age of specialization and mounting pressures. The tensions of modern high-speed living compel periods of rest and relaxation. This modern-day stress has induced more Americans to fish and hunt during the past few years than in any other period of history.

The Forest Service manages 152 national forests and 22 national grassland areas where everyone is welcome to hunt and fish. They contain 81,000 miles of fishing streams and nearly 2 million acres of lakes. In 1959 there were over 20 million visits to these areas for the primary purpose of hunting and fishing. Additional millions enjoyed photographing and observing wildlife in its natural environment.

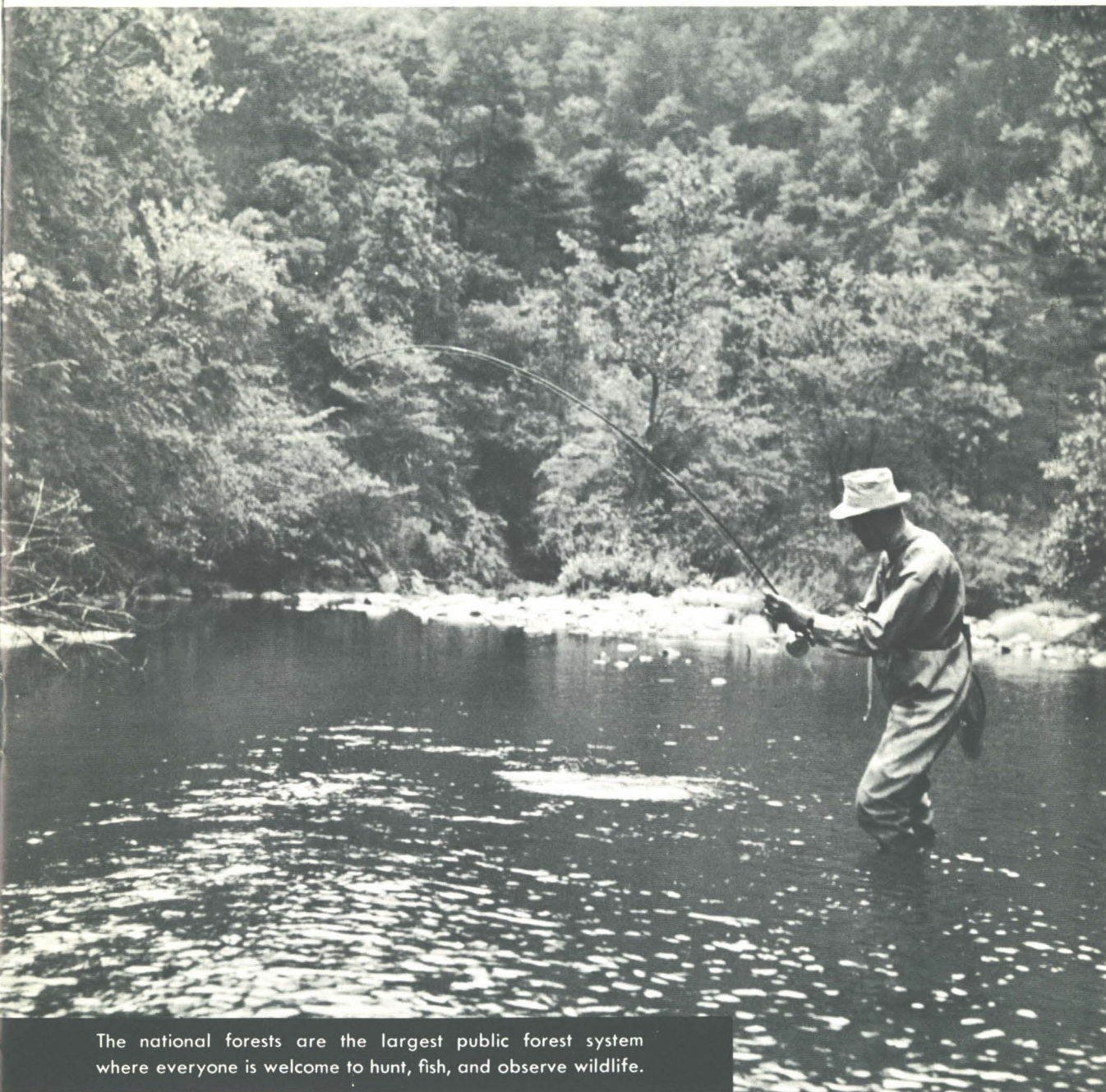
Within the national forests and along the streams and lakeshores, one finds, side by side, the executive and the mechanic, the banker and farmer, husbands and wives, young folks and old folks. These are the outdoor enthusiasts—a cross section of America.

Nationwide, there is a hunter or fisherman in every third household. They spend more than 3 billion dollars each year for equipment and services.

Public use of resources of the national forest system is soaring. Under scientific management the production of wood, water, and forage is being increased. Likewise, under scientific management, wildlife conditions can be improved. Operation Outdoors, part 2, is an action plan which was developed within the framework of the Operation Multiple Use program to promote management of national forest wildlife habitat—nongame as well as game species. This will be done through land use coordination and direct habitat improvements by the Forest Service in cooperation with State fish and game departments.



OPERATION OUTDOORS



The national forests are the largest public forest system where everyone is welcome to hunt, fish, and observe wildlife.

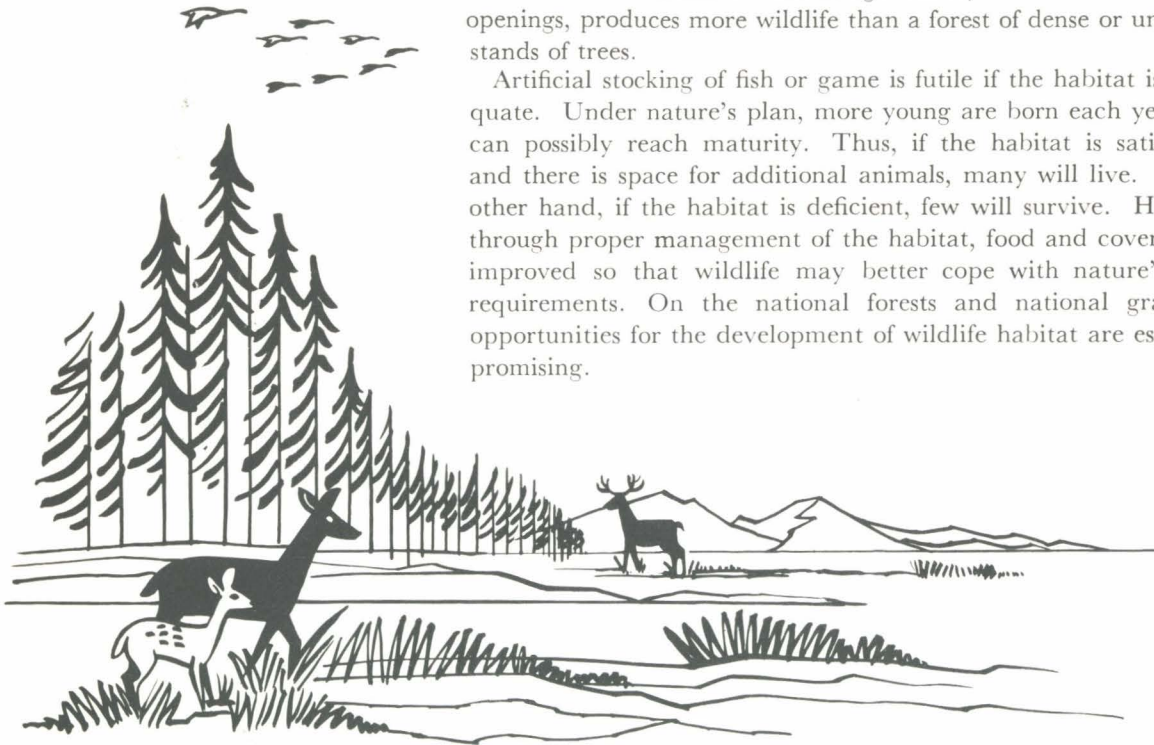
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WILDLIFE HABITAT IS IMPORTANT

Habitat is the common denominator for wildlife populations. An animal's home must provide water, food, and cover. Moreover, it must be of the right kind and sufficiently abundant and accessible to care for the animal's wants throughout the year.

Winter is usually the critical period. Food is often scarce or unobtainable. Many deer herds, for example, have ample habitat for all seasons except winter. Restricted by snow and weakened by inadequate food, the herd may lose more animals from starvation than are removed by hunters. Although each kind of animal has rather specific habitat requirements, our more common game species prefer an intermingling of brushfields, grasslands, and forests. Here rabbits, grouse, quail, deer, and other wildlife easily find a variety of food and cover. Here they can live in a comparatively small area with a minimum of exposure to enemies and the weather. Usually a managed forest that contains old growth, some cut-over sections in various age classes, and meadows or other openings, produces more wildlife than a forest of dense or unbroken stands of trees.

Artificial stocking of fish or game is futile if the habitat is inadequate. Under nature's plan, more young are born each year than can possibly reach maturity. Thus, if the habitat is satisfactory and there is space for additional animals, many will live. On the other hand, if the habitat is deficient, few will survive. However, through proper management of the habitat, food and cover can be improved so that wildlife may better cope with nature's harsh requirements. On the national forests and national grasslands opportunities for the development of wildlife habitat are especially promising.





Protective cover is an essential part of wildlife habitat.

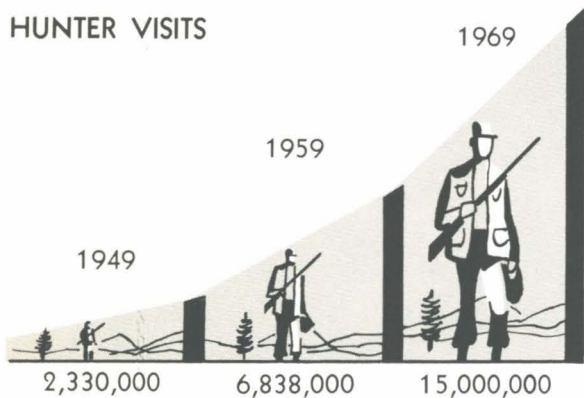
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NATIONAL FOREST WILDLIFE HABITAT IS VITAL

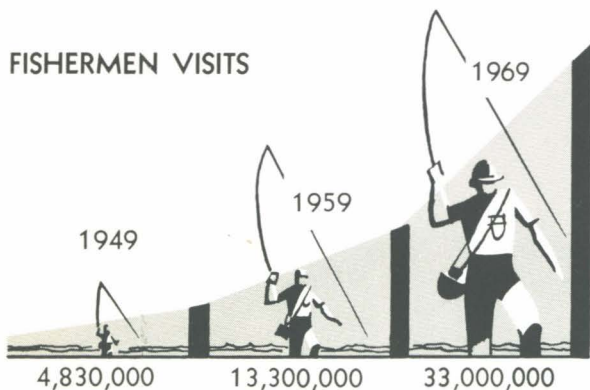
Wildlife is a public resource. It has a recognized place in national forest land administration. On these public lands a sustained program of wildlife habitat development can be carried out as a regular part of land management.

Wildlife can be produced on virtually every acre of land in the national forest system. Some acres are rich in wildlife, some are not. But in any case, the abundance of wildlife is almost certain to be a reflection of habitat quality. The national forest system encompasses sea-level to alpine conditions and is the natural home for many forms of wildlife. Somewhere in this vast forest system there is suitable habitat for virtually every kind of wildlife found in the United States.

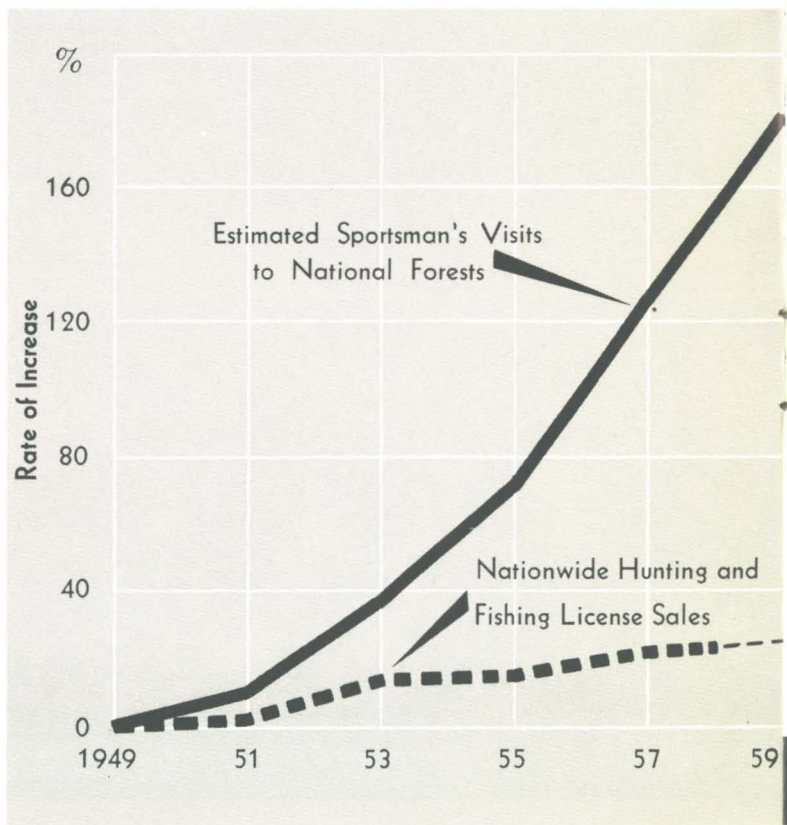
HUNTER VISITS



FISHERMEN VISITS



Hunter and fisherman visits to the national forests are rapidly increasing.



Hunter and fisherman visits to national forests since 1949 have increased eight times faster than the nationwide sale of hunting and fishing licenses.

One-third of the big game animals in the United States live all or part of the time in the national forests. This includes four-fifths of the moose, elk, and grizzly bear, and nearly two-thirds of the mule deer, black bear, and bighorn sheep. The relative abundance of small game and fur bearers is noted annually. These observations reveal the importance of the national forest as a habitat for tree squirrels, ruffed grouse, turkey, beaver, and the many other animals. The national forests are also the home of a few rare and vanishing wildlife species for which special management is necessary.

Interest in public lands is illustrated by the heavy recreational use. In 1959, over 81 million visits were made to the national forests. One-quarter of the visits were for the primary purpose of hunting and fishing. Hunter and fisherman visits to national forests since 1949 have increased 8 times faster than the nationwide sale of hunting and fishing licenses.



With proper habitat management, wildlife can be produced on practically every acre of national-forest land.

F-425950

WHERE WE STAND

All national forest uses are increasing. The job of coordinating them in a multiple-use program is, therefore, becoming both more important and more complex. It often requires the cooperation of other resource management agencies. This is especially true in wildlife management.

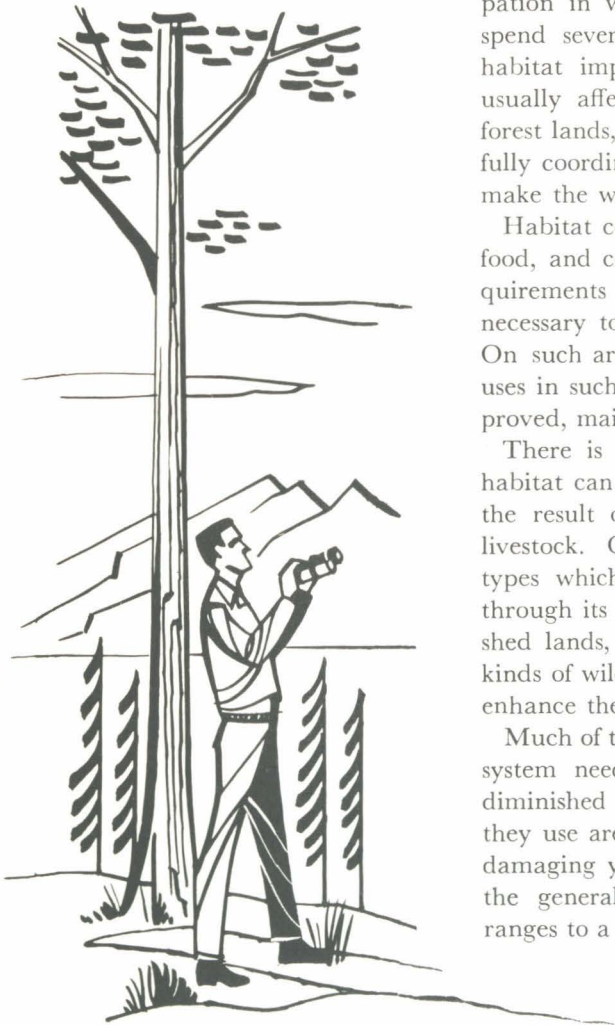
State fish and game laws apply on national forest lands. Thus the State fish and game departments and the Forest Service are partners. The Forest Service manages the land that produces the wildlife. The States protect and utilize the wildlife under individual State laws.

The State fish and game departments are expanding their participation in wildlife activities in the national forest system. They spend several million dollars on wildlife surveys, research, and habitat improvement projects each year. Since these activities usually affect the protection, management, and use of national forest lands, there is a growing need for the Forest Service to more fully coordinate its forest management activities with the States to make the wildlife programs of both agencies fully complementary.

Habitat conditions vary greatly on national forests. The water, food, and cover on some areas are sufficient to meet yearlong requirements of a high-level animal population; hence it is not necessary to take further measures to increase carrying capacity. On such areas, habitat management will consist of realining other uses in such a manner that conditions suitable for wildlife are improved, maintained, or not unduly altered.

There is substantial acreage in national forests where wildlife habitat can be improved. Some of these low-producing areas are the result of logging, forest fires, or overgrazing by big game or livestock. Others are due to the natural development of vegetation types which are unproductive for wildlife. The Forest Service, through its experience in management of forest, range, and watershed lands, has many opportunities to improve conditions for all kinds of wildlife. There are also opportunities to both protect and enhance the fishing on many streams and lakes.

Much of the essential big game winter range in the national forest system needs improvement. On some ranges forage plants are diminished to the point where both the game herds and the lands they use are adversely affected. In other places, deer and elk are damaging young trees needed for future timber crops. Although the general conditions are known, progress in restoring these ranges to a productive condition needs to be accelerated.



Many miles of national forest streams are not at their potential fish production capacity. Intensive land use in some areas has resulted in excessive stream siltation, unstable channels, and exposed and eroding banks. Improved fishing conditions will come about only through fully coordinated land management practices.

Additional personnel are needed to provide the leadership and training that is necessary if national forest wildlife habitat management is to keep pace with the rising demand for public hunting and fishing areas and the States' wildlife management programs. Technical leadership in wildlife habitat management in the Forest Service has been provided by a few wildlife specialists. Theirs is an important task for the wildlife job affects and is affected by all activities on the national forests. If the guidance of wildlife specialists is lacking, much of the wildlife habitat could be seriously damaged by inadequate coordination of other land uses.

TABLE 1. NATIONAL FOREST ACTIVITIES THAT AFFECT WILDLIFE HABITAT MANAGEMENT ARE INCREASING

National forest business	1950	1960	Increase
Timber cut, thousand board feet.....	3,502,000	9,367,000	167%
Reforestation, acres	45,000	112,000	149%
Timber stand improvement, acres	600,000	960,000	60%
Insect control (aerial spraying), acres.....	250,000	1,000,000	300%
Range revegetation, acres	63,000	272,000	332%
Roads constructed, miles	1,405	4,727	236%
Special use permits in effect.....	49,806	58,429	17%
Oil, gas, and mineral leases; Federal Power Commission licenses.....	2,478	12,768	415%
Recreation visits.....	26,080,000	81,521,000	213%
Sportsman visits.....	7,161,000	20,138,000	181%

THE PROGRAM

To keep up with the rapidly increasing use of national forests and with the States' wildlife management programs, part 2 of Operation Outdoors is proposed. This will enable the Forest Service to advance wildlife habitat management by expanding: (1) coordination of wildlife needs with all other national forest uses, (2) cooperation with State fish and game departments in all wildlife development programs involving national forest lands, and (3) improvement of wildlife habitat through direct development projects.

WHAT WE WILL DO THROUGH COORDINATION AND COOPERATION



National forests and grasslands are managed under the multiple-use and sustained-yield principles. Practically all areas serve more than one purpose or objective. Each of these land uses affects wildlife in one way or another. Some of the impacts are great—some are small. In turn, wildlife must be so managed as to maintain or improve other equally important forest resources. Hence coordination of uses is essential in wildlife habitat management.

Coordinating Multiple Use

Timber sales create opportunities for wildlife habitat improvement. Selective cutting, or clear cutting in small blocks, opens dense timber stands. Food and cover plants are stimulated. To realize the greatest benefits to wildlife, adjustments are made in timber harvesting plans. Winter cutting may provide additional food on deer ranges during this critical period. Leaving small clumps of conifers provides shelter for wildlife; cutting in long narrow strips increases the amount of "edge" cover and food; and leaving mast and den trees in hardwood cuttings protects the habitat of squirrels and other small game.

Forest roads can be located in such a way that they will contribute to orderly harvest of fish and game through better distribution of hunters and fishermen. Roads should be located away from streams and meadows. They should be adequately drained to prevent damage to fishing waters; road edges, cut banks, and fills can be seeded with soil-binding plants. Culverts should not interfere with fish movements.

In arid parts of the West, development of livestock watering places has extended the distribution of deer, turkey, grouse, and quail. A fence around a seep or spring will protect the water supply and provide nesting and escape cover for song and game birds. Range seeding can be planned to improve habitat for wildlife as well as domestic livestock by including legumes, palatable browse, and other important wildlife food plants in seeding mixtures.

This coordination is possible without impairing the other forest values—timber, grazing, water, scenery, recreation.



Wildlife habitat is improved when openings are created in dense forests.

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Cooperation With States

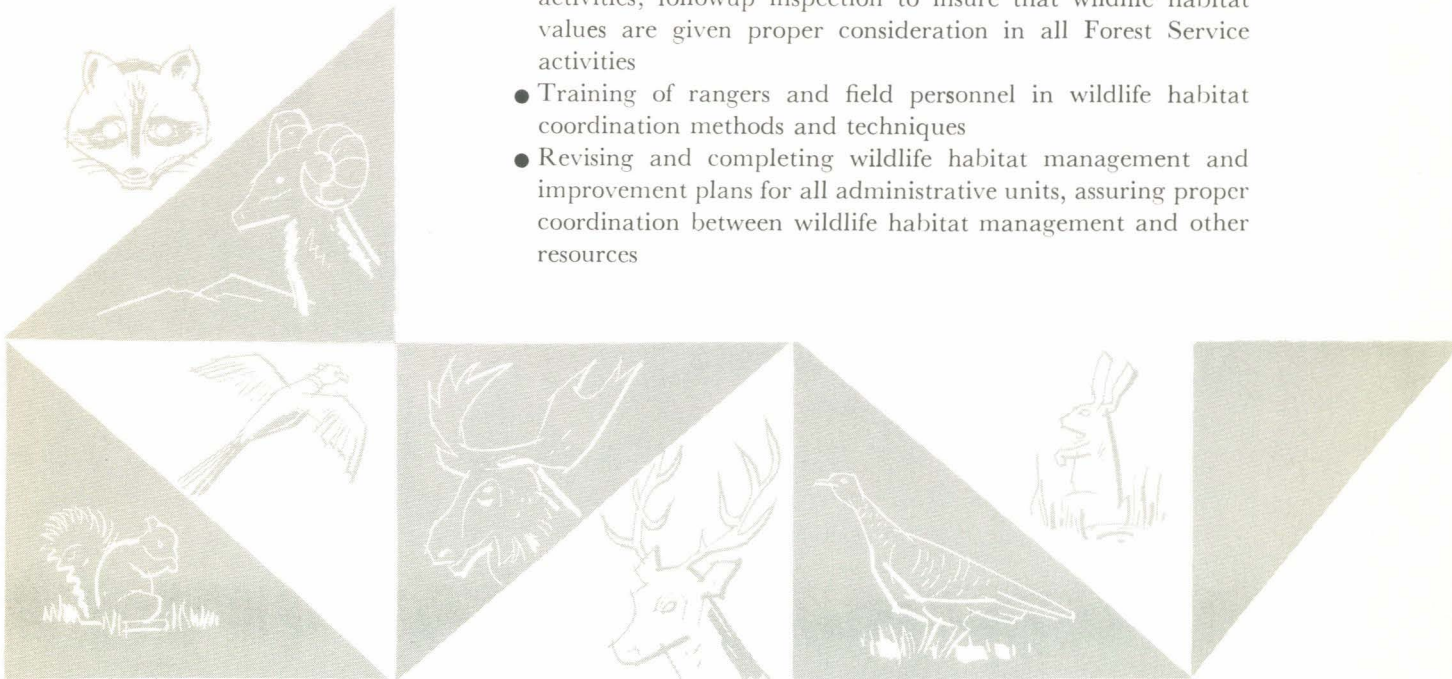
Basic to any program for wildlife management on the national forests are cooperative surveys of existing conditions to determine deficiencies or limiting factors in the existing habitat. These State-Forest Service surveys classify the condition and trend of key wildlife ranges and waters; determine the production and utilization of food supplies; estimate the carrying capacity of wildlife habitats; and consider possible habitat improvements, whether attainable through coordination with other uses or through direct improvement projects. On the basis of these surveys, plans will be developed to accomplish orderly development of wildlife habitat.

The States will continue to finance many habitat improvement projects on national forests. This is desirable and is encouraged. The Forest Service, in turn, has a responsibility to work with the States so that all non-federally financed habitat improvements are properly designed and located, and in harmony with the overall management of the national forest lands. This cooperation will include planning and engineering assistance and inspection.

Coordination and Cooperation Highlights

1. *Administer and Supervise* wildlife habitat management activities with special emphasis on coordination with other national forest resources. This includes:

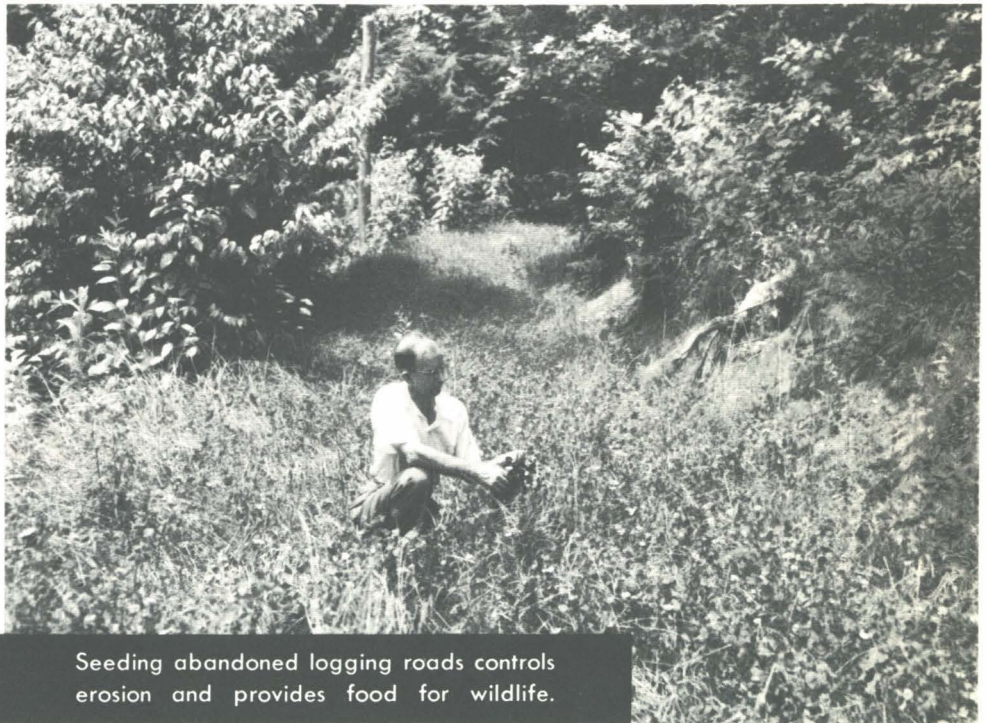
- Coordinating wildlife habitat requirements with timber, range, recreation, watershed, and other resource management activities; followup inspection to insure that wildlife habitat values are given proper consideration in all Forest Service activities
- Training of rangers and field personnel in wildlife habitat coordination methods and techniques
- Revising and completing wildlife habitat management and improvement plans for all administrative units, assuring proper coordination between wildlife habitat management and other resources



2. *Inventory and Evaluate* wildlife habitat resources in cooperation with other Federal agencies and with the States in which national forests and grasslands are located, as a basis for orderly development of wildlife habitat improvement and coordination programs. This includes:

- Big game, game-bird, and small game habitat surveys and investigations on the 185 million acres of national forest lands
- Fishery habitat surveys and investigations on the 81,000 miles of national forest fishing streams and approximately 2 million acres of lakes and impoundments
- Participation in planning, inspection, and control phases of all habitat improvement, land and water-use projects conducted on national forest lands by States, other Federal agencies, and private groups to assure that projects will benefit wildlife and be in harmony with other resource values

The estimated annual cost of the recurrent coordination, administration, and cooperation work outlined above is \$2,980,000.



Seeding abandoned logging roads controls erosion and provides food for wildlife.

F-471008

WHAT WE WILL DO THROUGH PROJECT WORK

There are many opportunities for direct wildlife habitat improvement on the national forests. Food and cover deficiencies can often be improved by breaking up brushfields, creating clearings, planting desirable food and cover plants, fencing stream bottoms, and developing marshlands. Where water supplies are deficient or poorly distributed, additional water can often be developed by building ponds, developing seeps and springs, drilling wells, or installing "guzzlers."

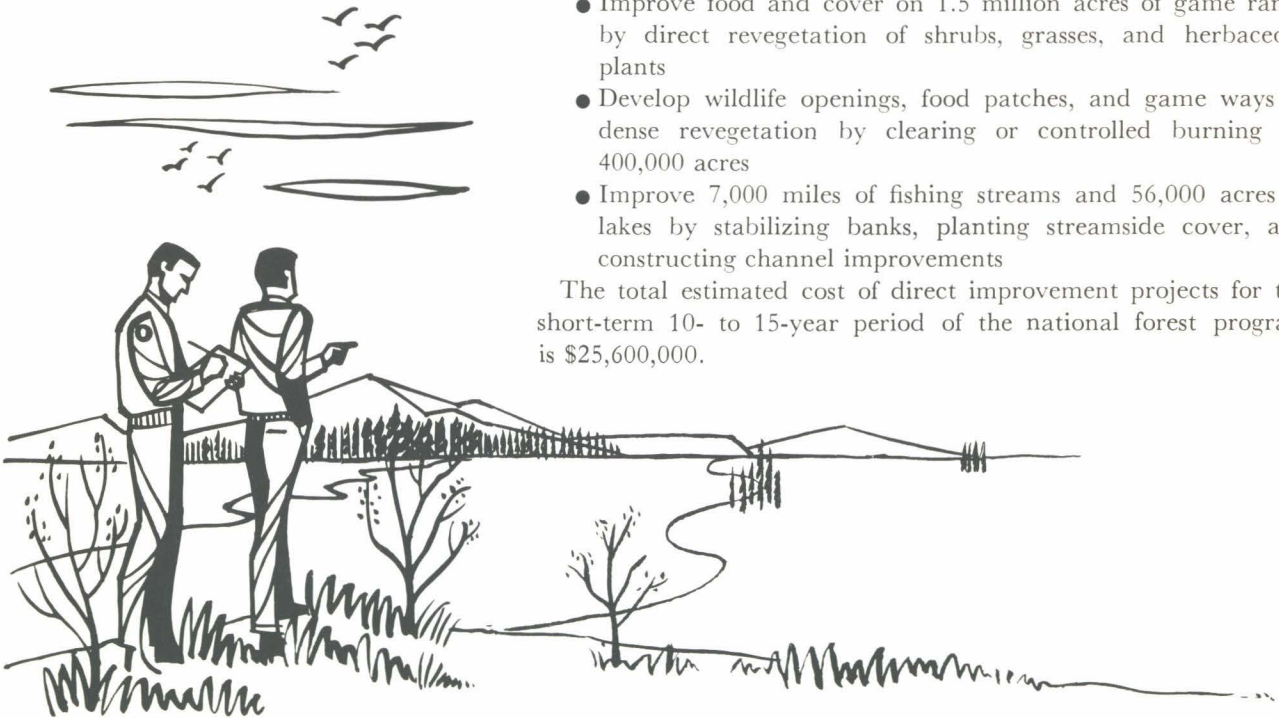
Fish habitat can be made more productive by streambank plantings, stabilizing stream channels, developing flow maintenance facilities, installing simple log or rock structures in channels, and by constructing small water impoundments. In recent years, State fish and game departments have furthered such developments. It is expected that the States will continue to finance structural improvements on the national forests.

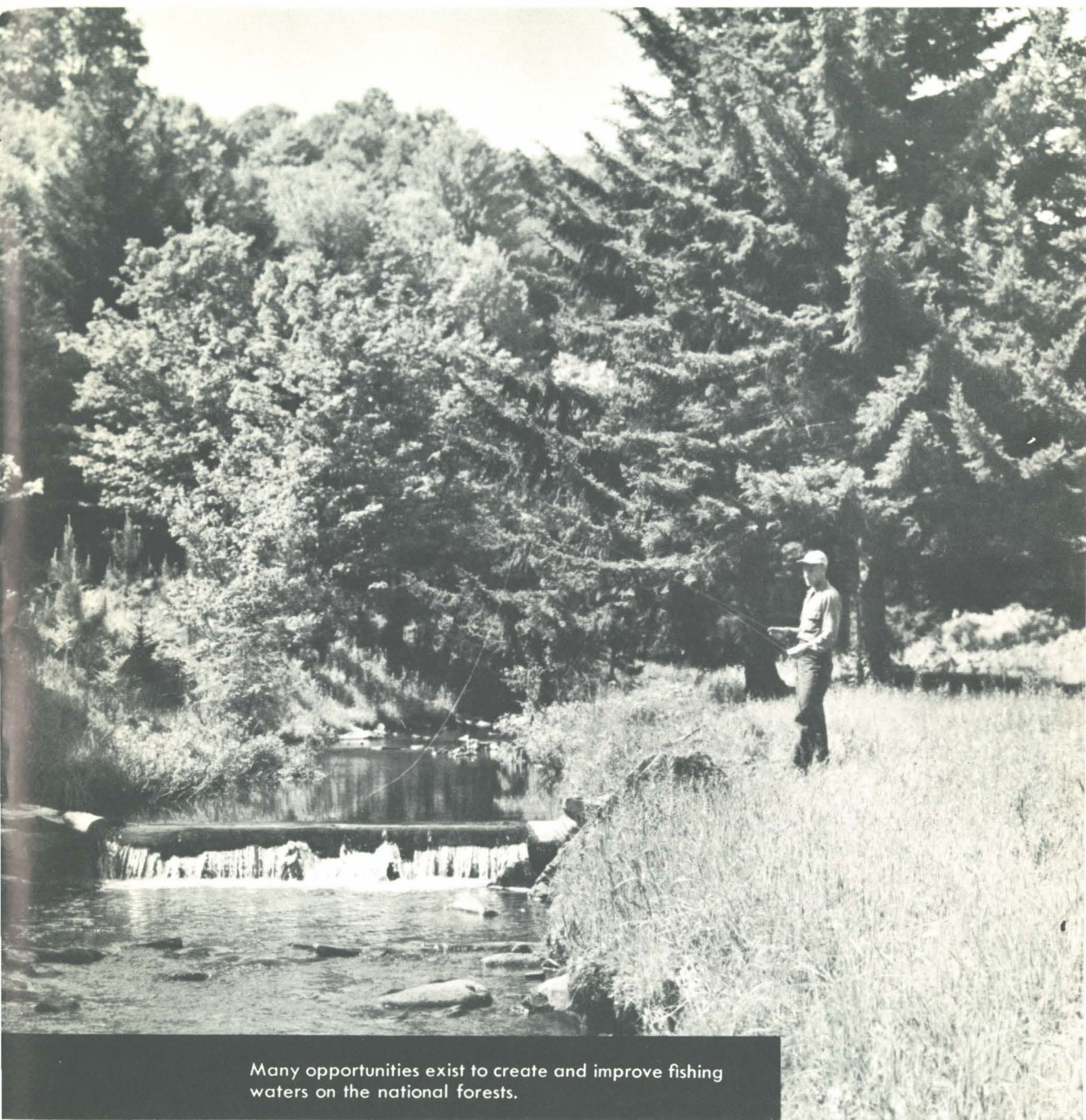
Project Highlights

Wildlife habitat improvement projects involving direct management of food and cover to improve key wildlife areas that will not be fully developed through other resource management activities.

- Improve food and cover on 1.5 million acres of game range by direct revegetation of shrubs, grasses, and herbaceous plants
- Develop wildlife openings, food patches, and game ways in dense revegetation by clearing or controlled burning on 400,000 acres
- Improve 7,000 miles of fishing streams and 56,000 acres of lakes by stabilizing banks, planting streamside cover, and constructing channel improvements

The total estimated cost of direct improvement projects for the short-term 10- to 15-year period of the national forest program is \$25,600,000.





Many opportunities exist to create and improve fishing waters on the national forests.

F-478743

HOW THE ESTIMATES WERE DEVELOPED

The coordination, cooperation, and administration cost estimates are based on an analysis of all Forest Service wildlife management tasks. Standards of work performance and time allowances have been established or estimated for each of these tasks.

The cooperative and administrative aspects of part 2, Operation Outdoors, will expand as State and sportsman activities on the national forests increase. The coordination task will become more difficult as the Nation's need for timber, forage, water, roads, and outdoor recreation grows.

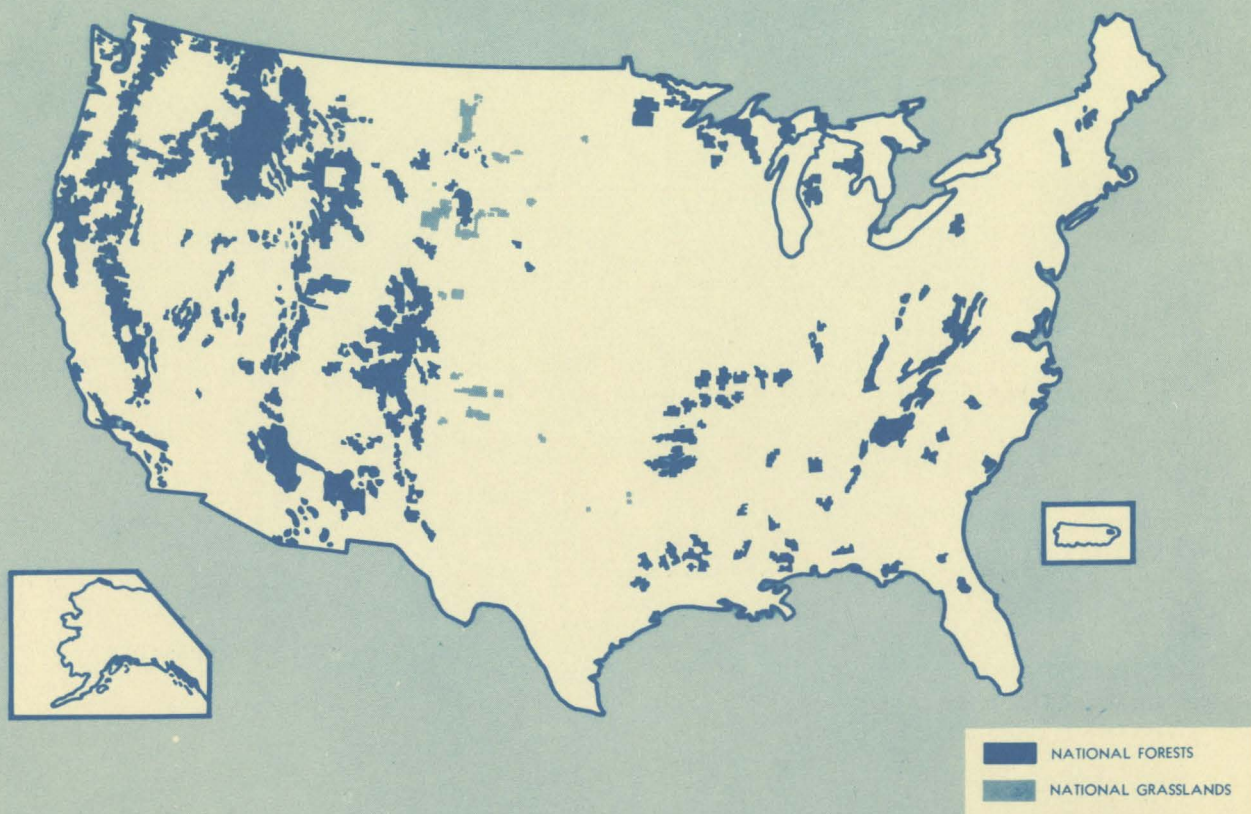
Direct habitat improvement cost estimates are based on high priority projects selected from the wildlife section of the 1958 Project Work Inventory. This inventory is a comprehensive survey of needed work projects covering all fields of activity. It is a work reservoir from which projects are drawn as national and local needs dictate.

The project work estimates for Operation Outdoors, part 2, have been developed from a background of cooperation with State game and fish departments. State and Forest Service responsibilities in wildlife work have been jointly reviewed and general policy guidelines endorsed. In brief, the policy guidelines provide that the Forest Service will take leadership in habitat improvement projects that involve the management of the land and the vegetation. The States will take the leadership and primary responsibility for financing construction projects such as dams. Estimates for these cooperative costs are based on current programs and high priority needs for new developments. Close working relations will be maintained with the States in all direct habitat improvement projects.



HUNTERS WELCOME

FISHERMEN WELCOME



NATIONAL FORESTS AND NATIONAL GRASSLANDS are located in—

Alabama	Kansas	New Hampshire	Texas
Alaska	Kentucky	New Mexico	Utah
Arizona	Louisiana	North Carolina	Vermont
Arkansas	Maine	North Dakota	Virginia
California	Michigan	Ohio	Washington
Colorado	Minnesota	Oklahoma	West Virginia
Florida	Mississippi	Oregon	Wisconsin
Georgia	Missouri	Pennsylvania	Wyoming
Idaho	Montana	South Carolina	Puerto Rico
Illinois	Nebraska	South Dakota	
Indiana	Nevada	Tennessee	

February 1961



PROGRAM FOR THE NATIONAL FORESTS



Growth Through Agricultural Progress